Bush (Jas. M.)

Observations on the operation of Lithotomy xxx

Presented by
Robt Reber

ART. XIV.—*Observations on the Operation of Lithotomy; illustrated by cases from the practice of Professor* B. W. DUDLEY. By JAMES M. BUSH, M. D. &c.

In every intelligent circle and by the most eminent men, it is admitted that experience is the true foundation of knowledge; and general science as well as all the departments of the healing art, have attained their present distinguished elevation by the aid of patient and discriminating investigation. Close and impartial observations of the phenomena of nature, are certainly essential to the accumulation of correct knowledge of disease; and in proportion as we estimate the facts honestly recorded at the side of the clinic, and appropriate them to the elucidation of morbid actions, does observation become a science and the progress of medicine certain, and uninterrupted. Chemistry and mechanics are experimental sciences, and their objects can be attained by certain and almost unerring principles. The laws of inorganic matter are much more simple and fixed, than those of the organic; and further removed from the ten thousand influences of modification that everlasting crowd the circle of animated existence. Thus in the very plans of Nature herself the reasons are obvious why medicine must be slow in its advances to perfection. And why too, so much difference of opinion constantly, and universally exists among the members of its profession. From the past history of that profession, we positively know that the present age will be very far from witnessing the completion of the system of physic, in those beautiful proportions which we believe that distant posterity will boast of. Still it becomes the responsible duty of every member to add from time to time, fragments, that may be required in the noble fabric. Every individual, in his familiarity with disease, has it within his power, more or less, to add a mite to the common stock of science, and to preserve what may be required for the establishment of some general principle hereafter to be discovered, and to secure an almost certain-

ty in the controul of disease. For the accomplishment of such an end we believe no more certain and appropriate method exists than to record the prominent and successful practice of distinguished surgeons and physicians.

Of the history, including the causes and nature of calculous affections, we design to say but little. An article* on the nature and treatment of calculous diseases, has been recently published from the pen of the distinguished operator to whose unparalleled success we are about in this notice to add our testimony. We refer to that paper for the suggestions relative to the causes supposed to operate in the production of calculous bodies in the bladder.

The observations of the author, whose experience, we certainly are at liberty to say, has been ample, corroborate the statements of all writers on the subject, namely, that this distressing malady rarely appears in southern climates and that it is equally a stranger to the inhabitants of "high latitudes and cold countries." Nearly the entire number of the subjects of stone in the bladder, who have presented themselves to and been cured by Professor Dudley, were born, raised and had lived in the more temperate regions of our land.

Although the causes of urinary desposite are not satisfactorily ascertained in their primary history, still we are disposed for the good reasons he urges, to lean to the opinion of Professor Dudley. In a late complimentary bibliographic notice of his pamphlet on the subject, the able and courteous reviewer seems to think that "the true cause no doubt will be ultimately traced to disease or injuries to the nervous system." He goes on:—"The sound condition of this tissue, is essential to produce healthful secretions of the organs to which the nerves are distributed. The fact has been conclusively established by Wilson Philip, so far as regards the stomach;" and he adds, "that in all cases of spinal irritation, the kidnies secrete an abundance of sabulous matter. We have frequently remarked this symptom of the disease, and have observed also a large quan-

*See Trans. Jour. vol. ix. No. 2.

tity of this secretion follow concussions of the spinal marrow floating in a turbid, offensive, and irritating urine. There is a case recorded in Duncan's Medical Commentaries, of an enormously large calculus, taken from the bladder of a man who had some years before received a severe injury of his spine. He had no symptoms of this disease previously to the injury." On this subject he further remarks:

"We are not disposed to contradict the opinion of Dr. Dudley, that this disease is always preceded by "chronic derangement of the digestive organs," as the continued existence of it strengthens our position. Every one will admit, that neuralgia, is almost invariably connected with disordered digestion. In tracing a history of calculous cases, you will be informed, that the existence of the disease is preceded by pain along the course of the spine. We are aware that this system has been attributed to the irritation of gravel in the kidnies, but we positively know, that spinal irritation is accompanied by pain in the back, neuralgic pains shooting down the thighs; and that this disease will cause an abundant secretion of calculous matter; why not then refer the pain to the same rational source?"

That the sound condition of the nervous tissue, is very essential to healthy functions generally, none will deny. Nor can there be a rational doubt, that an organ, to produce healthful secretions, must receive its particular nerves in a healthy condition; let that organ be the kidney, the liver, the stomach, or any of the organism. But is not the vascular tissue as important to an organ, for its natural secretion, as are the nerves? A deranged state of the bloodvessels of the kidnies, will most unquestionably interrupt, very materially, their healthy operations in the production of natural urine. And notwithstanding the alliance between the two systems, the bloodvessels are oftentimes the subject of disease, while the nerves remain normal.

If in *all* cases of spinal irritation, the kidnies secrete an abundance of sabulous matter, as Wilson Philip has observed, there are nevertheless also a multitude of other affections, not

complicated with "spinal irritation," in which the same organs throw off a large amount of calculous material floating in their morbid excretions. And on the other hand, it certainly does sometimes occur, that a patient who is distinctly the subject of spinal disease, manifests no morbid changes in his urine, so far at least as earthy or sandy conditions are concerned.

If a calculus follows a severe injury of the spine, it is extremely questionable whether the spinal injury caused directly the formation of the stone. Because, while such a circumstance is rarely recorded, it is a fact of some familiarity to the profession, that concussions, depressions, and other injuries do frequently occur to the medulla spinalis, operating as well upon the integrity of its structure as of its function, and still the kidnies remain undisturbed touching the production of sandy accretions.

That the continued existence of chronic derangement of the digestive organs, strengthens the position of "spinal irritation" as a probable cause of urinary calculi, might be readily admitted, if we had not been taught by irresistible reasoning the doctrines of sympathy, and the comparative paucity of idiopathic diseases. It is true that neuralgia is almost invariably connected with disordered digestion; and such a fact accords most strikingly with our experience. But upon the principles we have embraced, we must look upon the morbid manifestations in the nerves as entirely sympathetic, or associated; as originating in the disordered digestive function; and the treatment instituted upon such medical philosophy, has proven itself abundantly satisfactory in its successful results.

Sympathetic affections of the spinal tract do occur very frequently; perhaps as often as sympathetic hip-joint disease; a malady that might be said to be not rare in this region; one too that yields most submissively to the charm-like potency of constitutional remedies.

Upon the examination of a patient, with the view of learning the history of his case from first to last, among the less intelligent of those affected with stone, there is considerable difficulty in ascertaining a satisfactory account of the primary

symptoms. Still among all classes with the malady in question, pain along the course of the spine is a symptom rarely mentioned. Of the three last patients who have been under treatment for stone in the bladder, and have been recently discharged cured, not one can recollect of having pain at any time in the spine. And according to our own limited experience; and Professor Dudley, in his extensive intercourse with the disease, supports the assertion; spinal symptoms are so uncommon, as never to be considered in the history of calculi. These remarks are made honestly, and with motives only of recording the true characters of calculous affections just so far as we can bear witness to them in the practice we have observed.

If derangement of the digestive circle does not operate as a primary or even secondary cause of calculus, it is impossible to challenge its agency and powerful influence in aggravating the disease; and we say further, that it is a fact, supported by the observation of every surgeon, that the subject of stone in the bladder is also, in almost all cases, the subject of derangement of some kind in the chylopoietic viscera. Or if he be not, at the time of examination, unnatural in some point of his digestive actions, he has been a short time previous to his attack, or during the progress of the earlier manifestations of gravel.

To become satisfied of the influence which constitutional derangement, seated in any or all of the organs of the abdominal cavity, exerts over the local affections of the calculous patient, is to witness the preparation of such a subject for the knife by Professor Dudley. We have seen a patient, to whom the remedies were exhibited by our own hands, day after day for ten days together, suffering the most excrutiating pains which this dreadful malady is capable of inflicting, ultimately reach that point of general health, which rendered him so comfortable, as that he scarcely manifested or even complained of disease in the urinary organs. The evidences of chylopoietic disease of this patient, were displayed in the pulse, by its febrile action; in the stomach, bowels and liver, by an absence of the healthy characteristics of the alvine dejections; by the unnat-

ural tongue,which was thickly and whitely coated, and by the absence of the proper functions of the skin. Emetics, mercurial cathartics, and the warm bath, were the medicinal, light, bland, and unstimulant food, the dietetic means, resorted to, for the purpose of restoring the healthy operations of digestion. The ten days required to impress the general system with the remedies, and secure its return to a state more tolerant to the sufferer, were spent in restless and unceasing motion, in consequence of unremitting pain. The paroxysms of the bladder were in continued succession, while its scanty discharges were almost wholly muco-purulent matter with but scanty and acrid portions of urine. But the ten days succeeding were so comfortable, that he seemed scarcely to manifest any urinary interruption, day or night, until the operation permanently relieved him.

It is in the throrough preparation of his patients that Professor Dudley has achieved such brilliant triumphs for the noble art of surgery. And although the graceful facility with which he handles the knife is not surpassed by the best operators, (and we have witnessed its use in the hands of the first American surgeons,) still his mode of entering the bladder, with the particular instrument which he always prefers, may merit some share of his surpassing success. To multiplicity and fashion of instruments he attaches but little importance; and while he avoids their display upon all occasions, either in the lecture, or operating room, yet he has executed, in his long and rich experience, all the operations, from the most delicate to the most daring.

In the review alluded to above the author evinces some scepticism, relative to the propriety of emetics, as a preparatory mean, during a deranged state of the stomach.

"In the estimation of the solidists of the present day the deranged state of the stomach is rather an equivocal phrase. If the author (Professor D.) mean an irritation of this organ, or unhealthy secretions in consequence of such irritation, repeated emetics would not seem to be the appropriate remedies; but as unparalelled success has resulted from this management,

we scarcely feel warranted in questioning the propriety of this practice." According with the gentleman's views of *irritation*, he doubtless has strong reasons to suspect at least, "the propriety" of their exhibition in the disturbed actions of the stomach. That in deranged states of the stomach, and very often of the assistant chylopoietic organs, Professor D. does prefer the liberal use of emetic medicines, is a feature characteristic of his practice; and to their very successful results we offer our own testimony. "Unhealthy secretions of the stomach," the consequence of any cause, require correction, for they follow directly the morbid function of the organ, which may be the result of many causes. Call the cause of the "unhealthy secretions" irritation, which is certainly a term not altogether divested of the signification "equivocal." Irritation assuredly means some morbid action, but its true character, the pathologist, thus far, has not sufficiently developed.

A patient who was operated on July 3rd, for cataract, applied for relief June the 4th, since which time to within four days of the period when the needle was used, he took an emetic daily, for two weeks together, and after that every other day, up to the time specified for the operation. The emetic exhibited, was common salt, a half tea-cup full, divided into two or three parts, at intervals of twenty minutes, in large quantities of warm water, and this was the only medicinal agent used in his course of preparation. For while it caused to be thrown off copiously from the stomach, green and ultimately yellow bilious matter, in the morning, free and satisfactory evacuations from the bowels were secured, during noon, and evening. The unfortunate condition of this patient, who is from a distant state in the west, precluded the advantages of his regular and accustomed exercise; hence a derangement of his digestive apparatus supervened. He came to town, as he expressed himself, in fine general health, and expected no delay in the operation. But he had a coated tongue, constipated bowels, heat in his forehead accompanied by a sense of unpleasant pressure on his brain. These manifestations of abdominal derangement were enough to postpone the use of instruments, and commence

medicinal treatment. A few days previous to the laceration of the lens, the tongue had become clean, and remained natural, the bowels regular in function, and the head clear and easy—evidences that the organs had all returned to their healthy actions, and that the inflammatory consequences of the use of the needle would be slight and harmless.

We give this case as an example of the practice, wherein emetics are used to bring the general system to a healthy state; while the chloride of sodium, or common salt, is rarely preferred to tartar emetic or ipecacuanha, still in the case before us, it sufficiently illustrates the happy results of such treatment and the principles directing it. Any mean that will nauseate and agitate sufficiently the stomach and its assistant organs, will most commonly secure the actions necessary for their desired and healthy operations. We have seen patients under treatment for curved spine, vomited from two to four times a week, for a period of eighteen months together; confined during the entire time to a strict horizontal position, with articles of the lightest character as their food; and at the expiration of the time, get up, with the weight of their bodies increased several pounds.

Whether the deranged state of the stomach, in the patients, who come to Lexington for surgical operations, be the result of *irritation* or any other morbid action, (we have not seen a case of inflammation of the organ,) Professor D. has secured his unparalelled success chiefly by the liberal use of emetic medicines. To see the paramount importance he attaches to a perfect preparation of the general system, of all his patients, who are to submit to the knife, is to witness his seemingly tedious course, under such circumstances. While we have known a patient arrive on one day, with cataract, or a tumour, or hydrocele, or stone in the bladder, or any disease small or great, and put upon the table the next day for operation; we have seen another remain several months, undergoing treatment all that time, to change morbid actions of the digestive apparatus to healthy. Professor Dudley's instructions to his pupils on this subject are, never to operate until the general system is

as healthy as it can be made. And how tenacious of this doctrine he is, and how very persevering in its adoption, our illustrations of his practice will tell.—"If the digestion be *tolerably* good:" "not to operate when there is *much* functional, or any organic disease," is the language of the great Sir Astley Cooper. While the indefinite instructions of Mr. Travers are, "the patient should be well purged, and live abstemiously for a *short time* previous to the operation."

He condemns, most earnestly, the use of the lancet, as a preparatory mean for the performance of any operations; a practice that is reprobated now, we believe, universally, by the most intelligent surgeons of every country. Nevertheless, some of the most distinguished operators on the eye in Great Britain, attributed mainly their success in cataract, to bloodletting previous to the operation. We would here remark, that if Professor D. never bleeds before any operation; that for cataract is the only one in which he relies with confidence upon severe and profuse bloodletting, when inflammation of a high and rapid character is threatened after the operation; and then he always bleeds *ad deliquium animi.*

Authors, in stating the conditions under which lithotomy may be performed with the most favorable prognosis, *caution* the surgeon against its hazard in those individuals who have ulcerations of the bladder, accompanying stone. But we have known Dr. D. to perform the operation, and the result to be completely successful, when the organ was ulcerated:—only, however, under circumstances of a particular nature. For if the organ is in a state of ulceration, while the general health of the patient be bad; he is constantly discharging from his painful bladder, pus, blood, thick and ropy mucus in large quantities, while the renal secretion is thrown off scanty in amount and irritating in quality. Under those conditions the operation would very certainly prove fatal; but by the treatment alluded to before, whereby the digestive organs are restored to their natural actions, the agonizing paroxysms of pain retire, the discharges of blood and muco-purulent matter subside, and clear unoffensive urine appears in more copious and

natural discharges. Yet the ulcerated condition of the bladder exists, but with a more healthy surface, and with a capacity to heal so soon as the stone is removed. Such cases we have known occur more than once, in the practice we have witnessed for the last four or five years.

The chief object of this brief article is to present the detailed treatment of a few cases of uninary calculi; illustrative of the general practice, which up to this time, has been so surpassingly successful in the hands of the Professor of Anatomy and Surgery in Transylvania University. This surgeon has amply discussed the relative value of the several operations now proposed for the cure of the malady, with the reasons for his choice of the lateral method. He has also set forth in the same paper, with unanswerable argument, his reasons for the preference he gives to the gorget over the knife and all other instruments.

When a patient applies to Professor D. with the ordinary symptoms of stone; to ascertain its existence the first step of course is to explore the bladder with a metallic sound. This simple but indispensable operation, however, he never performs, in any case, for several hours after the arrival of the patient; and not even then, if there be pain in the organ or the slightest fever. For it is considered highly detrimental to the sufferer, to disturb the constitution while thus deranged, even with an instrument usually so harmless. Should the general condition of the patient's body not otherwise forbid, the day after his arrival, he is sounded, having taken a general warm bath the evening previous. But if he be suffering with paroxysms of the stone, and his blood-vessels exhibiting febrile action, with a deranged state of the alimentary tube, more energetic treatment is required before the instrument is passed into the bladder. Nauseating potions of ipecacuanha or tartar are exhibited, and should these fail to reduce the pulse and restore cutaneous action, or a proper condition of the bowels, aided by the bath; an emetic, or cathartic, or both are then superadded, with light and abstemious living. By these means two objects are effected. The first, is a prevention of any irritating

results from the examination of the bladder; the other is that so much is gained in the preparatory management of the general system. Until he is completely satisfied that all the organs are in the healthy performance of their various functions, he will not operate. When, however, it is believed that the patient is ready, having been once or more times sounded, he is placed on the table and tied; immediately the staff, being oiled, is introduced into the bladder, and left resting upon the stone; when the assistant grasps it firmly, to maintain it in the bladder, at the same time holding it perfectly perpendicular to the table, carefully avoiding any inclination of it to the right or left. The convexity of the instrument being distinctly felt in the mesial line of the perineum; the operator, seated in a convenient chair, with his instruments spread on his right, proceeds to the operation. While the left hand controuls the scrotum and perineum, the right makes an incision, with a middle size convex edge scalpel, beginning a little below the root of the scrotum, and terminating an inch, more or less, behind the verge of the anus, in a straight line, through a point midway between the verge of the anus and the inner edge of the left tuber ischii. This cut divides skin, subcutaneous tissues, and perineal fascia. The second stroke of the knife is not so extensive, it divides only the posterior fibres of the accellerator urinæ, and transverse perinei muscles. Always at this stage of the operation, if the perineum be remarkably concave, presenting an inclined plane, or if the arch of the pubis be very much contracted, Professor D. introduces the left middle-finger into the rectum, and draws off the bowel to the right. The fore-finger then placed in the wound conducts the scalpel through the membranous part of the urethra into the groove of the staff, cutting from the rectum towards the bulb. The scalpel is now laid aside and the gorget is taken up, the beautiful instrument of Mr. Cline; with its cutting edge toward the pubic arch; its beak is made to engage the groove of the staff, while the assistant resigns the latter to the surgeon's left hand, who for an instant playing the two instruments against each other, lateralizes the former, turning its cutting edge to the left, poises

it a moment, perfectly horizontal, before he plunges through the prostate into the bladder. At the same moment the gorget is passed with the right, the left hand depresses the handle of the staff; the bladder being opened, the staff is withdrawn, and the surgeon's fore-finger of the left hand, directed by the gorget, is passed into the bladder, and the instrument withdrawn; the wound in the neck is dilated, forceps introduced, the calculus seized, and by steady, firm, and dilatory movements, from below upwards, and from side to side, the operation is completed by the extraction of the stone. The bladder is now cautiously explored with the scoop, and if found clear is filled with warm water from a syringe; the patient is untied, turned to his left side and thus put to bed, and is required to maintain the position for from two to four days. We have seen Professor D. in making this operation, release his patient in forty seconds from the first incision, while upon other occasions, twenty minutes were consumed before the extraction of an enormous calculus could be safely effected. He makes it a principle never to operate in any case against time, but always firm, deliberate and dexterous, he goes through what is before him with a rapidity compatable with circumstances and the safety of his patient. In the operation of lithotomy especially, his incisions are made with the greatest expertness and brilliancy; and notwithstanding we have repeatedly assisted him, we have not realized the moment when the gorget was passed, the staff withdrawn, and the finger thrust into the bladder; these three different points of the operation, always seem to be the work of an instant.

In all his operations, he has used but two sizes of the gorget, the smaller seven-tenths, the larger eight-tenths of an inch broad in the blade. With the latter instrument, he has made an incision through which was safely extracted a calculus, three and a half inches in its long diameter, two and a half in the short, and eleven in circumference.

It is evident that the larger size of the two is not wide enough to divide completely the prostate laterally, in the adult, or

even at any age from twelve years to maturity; while with the smaller gorget, the prostate of the child from three to twelve is entirely safe from the invasion of its capsule. Certainly the opening made into the bladder, by either of the two instruments, is often very disproportionate to the size of the stone, still in one hundred and forty-three cases, in which those identical gorgets have been used; calculi varying from the size of a pea to that of the magnitude just cited above, have been extracted; with complete success and safety to the bladder, in all cases; and in but four did the subject die before he had time to enjoy the happiness of a cure. Yet in those four cases, which failed to realize the benefits of the knife, in consequence of the supervention, or aggravation, of other diseases, beyond the control of remedies, the bladder healed before death, or they passed the usual period of closing.

Some surgeons when they have cut into the bladder, and ascertained that the stone is very disproportionate to the extent of the incision, prefer using cutting instruments a second time, with the view of extending the cut in the prostate and neck of the bladder. This practice our teacher has never adopted; but on the contrary always condemns. He contends, it is more philosophic surgery, in such cases, to extract the stone by increased tractive force, risking even a certain degree of laceration. No surgeon estimates more highly than he the advantages of a clean, smooth incision; but his extensive experience, in the operation of lithotomy, has entirely satisfied him, that the danger so generally ascribed to violence done the deeper tissues, in laceration, is not at all comparable with the beneficial consequences of such practice. Indeed the results of his mode of operating, under circumstances of a large calculus, induce him to inculcate the principle, that it is better, safer to extract by force, according to the size of the stone, than to resort a second time to the knife. In every instance, where he was required to remove a stone, which he commanded with forceps in the bladder, he has uniformly extracted by gradual dilatory and tractive force, without in a single case dragging away any of the soft parts.

Every surgeon understands the great facility with which a calculus may be taken from the female bladder, so dilatable are the parts concerned in the operation. Unless the accretion be of unusual magnitude, Professor D. does not in the female use any dilating means previous to the moment of commencing the operation. After the patient is thoroughly prepared, and it is ascertained that the calculus is moderate in size, he proceeds directly to the operation. The same position is required as in lithotomy. With a graduated supply of forceps, he first introduces the smallest size, and gently expands the blades, in various directions, until the urethra and neck of the organ will admit the next size instrument; so on until with forceps of a proper kind, he can grasp and remove the calculous body. We have witnessed this operation, made upon a little girl six years of age, completed in forty minutes by the removal of a stone of the size of a pigeon's egg, and the pain did not seem to equal that caused by the extraction of a similar size body in lithotomy. This patient was perfectly well in five days after the operation, without loss of the powers of sphincter vesicæ. If the urethra, and neck of the female bladder is so extremely relaxable, under the influence of instruments, without the aid of incision, why not expect to find the same accommodation in parts similar in the male, with the addition to be sure of the prostate body; a piece of anatomy, that Nature seems to have constructed with a peculiar fitness to facilitate extraction, doing away the necessity of dangerous encroachment with the knife, beyond the point of its fibrous envelope. The prostrate gland, appears not only to possess the property of ready and innocent laceration, splitting of its tissue, but also of extensive dilatation; and indeed it would appear that its strong capsule was also accommodating in a relaxing character.

The operation completed, the patient is put to bed without the slightest dressings of any kind, but required to remain on the left side, until suppuration is established. He is not disturbed, even with sponge and warm water, until twenty-four or thirty-six hours after the operation. From his long experience Professor D. does not fear infiltration of urine; nor has he any

reasons to adopt means, such as catheter and sponge, or any material for the purpose of plugging the wound, since such a result never has followed his operations. Infiltration unquestionably does occur in many cases, and sometimes terminates in sloughing or mortification of the parts involved, and even in the death of the patient. But we do not believe that either of those undesirable effects do follow, (unless in very rare cases,) as a mere result of the operation. We should rather ascribe such a state of things, nine times in ten, to the ill condition of the general system previous to and at the time of the operation. Under such circumstances serious wounds of any description, are, most assuredly, far less manageable, than in the opposite state. Then when the perineum, the urethra, prostate body and neck of the bladder have suffered a solution of continuity, when morbid actions are existing in the economy, nature too often must fail in her restorative attempts, while healthy progressive inflammation cannot develope itself sufficiently to erect barriers to the diffusion of urine; adhesive lymph is not thrown out in sufficient abundance along the incised parts, thus to restrain the limits of the urinary discharges.

Professor D. has operated one hundred and fifty-three times; of this number, ten were females, six Africans, the remainder adults, youths and children. One hundred and twenty-two have been attended in the same apartments, and nursed by the same individual, Robert Beatty. Six were operated upon out of the city, and twenty-five at different houses in Lexington, private and public. It has been suggested that a statistic table, containing names, residences, &c. should be published by the surgeon. It would not be a difficult matter to fabricate names, ages, residences, &c. and display them in a regular and formal table. But since he never has kept a catalogue of names of patients for any of his operations, he could not make out one third of the list who have been cured. Indeed two of the three last, who were cured of calculus, left him ignorant of the name of either; both being charity cases, there was no reason why their names should go into his account book. And just so with the majority of his stone cases; the larger part being paupers,

and unable to pay a fee. But if it be questioned, that the accounts given of those operations are untrue, either from dishonest motives, or undesigned miscalculation; evidence sufficient to satisfy any candid and unprejudiced mind, even more ample and conclusive than a statistic list after the fashion of nostrum venders and certificate publishers, can be given.—Robert Beatty, who has kept a private hospital for Professor D. the last twenty years, and has nursed more than one thousand patients, in different operations, can bear testimony, that one hundred and twenty calculous subjects, have been attended in his wards, who were operated upon either in those rooms or in the amphitheatre of the Medical College; and but four of this number are reported uncured; or rather, might we not say, did not enjoy a release of their calculi. It has been stated in the article, before alluded to, that out of the entire number operated upon—only four died. And the circumstances of each case are detailed. Yet it is fair to state that in these few unsuccessful cases, the bladder had healed, or they lived through the time generally required for the closure of that organ. Chronic disease of the liver; pleurisy imprudently excited by the patient himself, when about to quit his bed. Inflammation of the kidnies, with complete suspension of urine, and abscess of the same organ, which existed before the bladder was cut, were the prominent causes of failure in these four subjects.

The following catalogue can be honestly presented, and were it necessary, sworn to.

In Robt. Beatty's private hospital, Lexington,	122
Judge Hill, near Bardstown, Ky.	1
Parson King, on the banks of the Cumberland, Ky.	1
Parson McConnico and Mr. White, in Tennessee,	2
In Madison county, Ky.	1
In Paris, Ky. Mr. Hughs,	1
At Wickliffe's Hotel, Lexington,	1
At Porter's Hotel, Lexington, Mr. Broadwell's son, of Ky.	1
At a private house, Lex., Mr. Moore, Nicholas cty., Ky.	1
Do Jas. Bradford, of Tennessee,	1

At his house in Lexington, Mr. Bradford,	1
At Mr. Paul's in Lexington,	1
Private house, Lex., Mr. Porter's son,	1
Do negro boy of Mr. Shannon's, Louisville, Ky.	1
Do negro boy of Mr. Rodes's, Richmond, Ky.	1
At Mrs. Broom's, a little girl, Lex.,	1
At his own house, Lex., Mr. Vanpelt,	1
A private house, opposite Mr. Vanpelt's,	1
At a private house, Davis' son, Shippingport, Ky.	1
Mr. Owen's, his own house, Lex.,	1
Negro boy of Mrs. Holloway's, private house. Lex.,	1
At Mrs. Mitchell's, Lex., a young lady from Tennessee,	1
Mr. Vigus's son in Lexington,	1
Mr. Tourman, private house, from Albany, Ind.,	1
At Mr. Moore's, Lex., L. Reser's little boy, Ky.	1
At Professor's D.'s office,	1
Mr. Ferguson's son, Lex.,	1
On Upper street, Lex., a little girl,	1
At private house, Lex., Mr. Thurston, of Ky.	1
At a private house, Market street, Lex., little girl,	1

We will conclude this article, with a detailed history, of the treatment of the three last patients. The operation was made upon all the same day.

Case 1.—Tourman aged 27 years. Admitted May 3, 1837. Has been the subject of the malady for the last fifteen years, but was so well two years since as to take a wife. He passes sometimes, two, three, and four months, without much suffering. Arrived in a carriage—is very sore and suffering unusually. Not in a condition to be sounded, but has all the symptoms of the disease, plain and manifest. May 13, has some fever, but a perceptible improvement, in the tongue, and general appearance. Has been vomited several times with ipecacuanha, and taken mercurial cathartics, with light diet; bilious organs secreting green matter; give grain doses of ipecacuanha until fever subsides. 14th. Better, no medicines. 15th. Fever, give an emetic. 20th. Has continued to improve, requiring occasionally calomel and ipecacuanha in grain doses.

31st. Has been free of pain and fever for several days, tongue clean, urine clear and increased in amount; bowels free. Operation performed this morning and a calculus extracted weighing three hundred and twelve grains, of the fusible order and spherical form. Put to bed on his left side.

June 1. Tongue and pulse natural. Wound cleaning. 2d. Doing well. 3rd. Doing well. Wound suppurating, and urine clear, may turn to his back a little while occasionally. 4th. Water passing urethra. 5th. Doing well. 4th. As yesterday, 7th. Water returning through the wound. 8th. Wounds rapidly closing. 11th. Water stopped through wound. 16th. Leaves his bed, bladder closed, and external wound nearly cicatrized. 18th. Walks about the house. Has been taking light animal food for a few days. 21. Discharged cured.

Case 2. Leonidas Reser, aged 7 years. Admitted April 22, 1837. This child has had his disease for the last three years. Appears to have come on without any assignable cause, so far as his friends can inform. He had enjoyed good health up to the period when his urinary organs first gave manifestations of a diseased condition. On his arrival had some fever and was ordered a general warm-bath in the evening preparatory to sounding, next day being free of pain, and no fever, the instrument was passed and a stone readily ascertained, since which he has had great bilious derangement, costiveness, dark brown fur on the tongue; daily fever, with constant and painful paroxysms of the bladder. Pantaloons always wet; emetics, calomel, and nauseating potions of ipecacuanha. May 14th. Still fever, vomit to-day of tartar. 15th. Emetic has not done well, one-half grain tartar, two grains calomel every thirty minutes until its free effect is secured on stomach and bowels.—16th. Better. 18th. Some fever, with white ulcers on inside jaws and on tongue. An emetic followed by small dose calomel and afterwards ol. ricini. 19th. Medicines have all acted favorably; mouth and tongue better; pulse improving. 22d. All symptoms improved. 31st. Has been free of fever for the last four days, tongue clean, urine clear and paroxysms of stone almost entirely gone. The operation is made and a stone

of three hundred and forty-four grains weight of the fusible order, long oval shape, was extracted. Was very unmanageable on the table, still no difficulty occurred. Put to bed on left side. June 1st. Tongue a little dry; pulse slighty excited, hypogastrium and supra-pubic regions tender, tepid ablution for thirty minutes removed these symptoms. Evening, wound clean and discharging freely of water. 2d. Better, but still complains when the lower part of abdomen is touched; tepid bathing to the part. 3d. Better in all respects; bowels natural, no fever, wound suppurating, pain of hypogastrium retired. May turn to right side and back occasionally. 4th. Pulse, tongue and bowels natural. 5th. Improving rapidly. 7th. Doing well. 8th. Wound nearly closed at the bladder. 11th. No water has passed the wound for two days. 16th. Leaves his bed, with the external wound nearly healed. 18th. Wound skinned over; runs about the house and yard:—discharged cured.

Case 3.—Montgomery Moore, aged 19 years, admitted May 30, 1837. His mother thinks he has had the disease from infancy. Has not suffered very much only within the last three years. And more within the last month, after going into the water fishing. From every appearance and examination, his general health is now good, and there is no reason to delay the operation. Has ridden on horseback and in the stage sixty miles within the last twenty-four hours, is free from paroxysms, with a clean tongue, healthy bowels, and natural pulse. Twenty grains rhubarb to night. 31st. Medicine has acted well and the subject in all apparent respects favorable for the immediate operation, which was made this morning. The incisions through the perineum and into the bladder were completed with the usual facility, but upon the introduction of the forceps great difficulty presented. In seizing the calculus, it was very soon found to be extensively attached to the bladder. After repeated and forcible efforts, however, it was dislodged from the bladder and brought within the prostatic incision, from which it was soon extracted by means of the scoop. The stone was of the mulberry species, and very rugged. From the amount of mu-

cous coat dragged away with it, the conclusion was fair, that it had been almost encysted. Its form is eliptical, weighing one ounce and two hundred grains, and its long circumference is five inches. Seven hours after the operation, had bled about a half pint, and becoming restless. Twelve hours after, has sick spells; hæmorrhage continues. June 1st. Has passed a bad night, extremely thirsty, and vomits up all his drink. Tongue has become white, pulse frequent and feeble, still bleeding with a large clot in the wound, no manifestations of rallying. In the afternoon some tenderness of hypogastrium upon pressure, hot clothes to the part. Pulse rising, but still too indistinct and feeble; goes into warm bath, for five minutes, soon after vomits blue bile and a large worm; slight subsultus; three hours after, quite delirious; pulse up with increased force and fulness, surface now hot; will not confine himself to the left side, but tosses continually; six hours after this, pulse the same; stupid; abdomen painful to the touch, lies on his back. Gave two drachms sulphate magnesia every two hours until bowels are opened. 2nd. Pulse better, mind clearer; wound has ceased all bleeding, and is clean. Medicine has operated freely; not so restless. Evening, 7 o'clock. Pulse softer but fuller; abdomen hard and painful; warm hip bath; feels better, wound gaping and clean. 3rd. Decidedly improved; pulse nearly natural in force and frequency, bowels open, and he sleeps occasionally. 4th. All symptoms better, and wound suppurating freely. 5th. Doing better than yesterday; evening, some fever. Hip bath; ℞ 3i sal. ep. grs. ij. tartar in potions of water, at intervals until bowels are open. 6th. Medicine has acted well, has no fever. 7th. Doing well, still some pain over the bladder, especially in the left groin, hot clothes to the seats of pain. 8th. Pulse good; has slept well; soreness decreasing. Wound granulating finely, still gapes open. 11th. Appetite excellent, pulse good and tongue clean. 13th. Doing well. 16th. Wound contracting. 18th. Wound doing well; general system undisturbed. 21st. Continues to improve. 27th. Water for the first time has passed the uretha. 29th. Has drank large quantities of iced water, and has a pro-

fuse diarrhœa in consequence—appetite impaired. 30th. Diarrhœa has continued to this date; quite exhausted, with small feeble pulse, ℞ Calomel grains ii. camphor grains iv. opium one half grain, in pill. July 1st. Since the pill, bowels have been tranquil, pulse full and strong. ℞. ipecac. grs. iv. in three pills—to be taken hourly. 2nd. Medicine has operated and he is better. 4th. Has improved greatly in his general health and the aspect of the wound is now excellent. Water passes both ways. 9th. Wound in the prostate and neck of the bladder seems to be entirely closed, while the external wound is quite contracted, suppurating and granulating finely. Has been walking about his room and the house, for two or three days. He is discharged to go into the country, since which he has done well. In this case, it is very evident that the operation, was made almost too soon. The encysted character of the calculus no doubt, under the best state of preparation would have been followed, in its extraction, by some unpleasant results; still had this patient been vomited and purged for a few days and restricted to light diet, he would have gotten through with much more facility. The fact of his throwing from his stomach, the second day after the operation, blue bilious matter, and a large lumbricoides, are evidences that there was some latent diseased action in his digestive organs, that should have been removed previously. But his manifestations of good health were so conspicuous that no reason was present to justify a suspicion of any derangement in the abdominal organs. Rarely such cases occur and the surgeon is deceived.